



ELECTRONIC AEROSOL THERAPY SYSTEM
INSTRUCTIONS FOR USE

Mod. MO-03

Conserve this manual carefully

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ULTRASOUND AEROSOL THERAPY SYSTEM FOR DOMESTIC USE

Thank you for choosing a Norditalia Elettromedicali product.
This electronic, ultrasound aerosol therapy appliance is designed for efficacious, convenient and rapid therapeutic use.
Thanks to its silent operation, display with real-time operation information, its innovative and ergonomic design, and broad range of accessories, it can be used in all situations with maximum practicality.
The battery pack (optional) offers more than 45 minutes of autonomy, permitting repeated treatments without requiring recharging.
The support base transforms the portable appliance into a table one permitting therapy while reading, writing, etc.
For paediatric use the appliance base can be fitted to a bed or to other supports (with a belt), thus freeing your hands; in this way even very small children that have to be kept still or held in arms can also be treated.
To get the best out of this appliance, we recommend reading this user manual carefully.

DESCRIPTION OF THE APPLIANCE (Fig. 1)

- 1) Filter cover
- 2) Filter (1 + 2 spares)
- 3) Fitting for extension tube
- 4) Cover
- 5) Medicine cups (10 pieces)*
- 6) Fan
- 7) Water tank
- 8) Appliance body
- 9) Keyboard
- 10) Rechargeable battery (optional)
- 11) Belt
- 12) Table base
- 13) Extending feet
- 14) Paediatric mask
- 15) Adult mask
- 16) Mouthpiece
- 17) Extending tube
- 18) Adapter
- 19) Power supply LED.

- Nebulising speed signal
- Flat rechargeable battery/low mains voltage signal
- Timer/Overheating signal
- Water finished signal
- Nebulising speed regulation button
- Button for switching the appliance ON / OFF

The appliance also includes a nylon bag and instruction manual.
On request, an extension tube with a maximum length of 60 cm. Is available, useful for paediatric applications.
* The ribbing on the medicine cup is a production characteristic and is not a production defect.

IMPORTANT WARNINGS

- When using any electrical appliance several fundamental rules must be observed:**
- carefully read all the instructions before using the appliance;
 - inhaling any substance must be agreed with your doctor, who will indicate the most suitable doses and administration methods;
 - some medicines are not suitable for ultrasound nebuliser use. Always consult how a medicine should be used.
 - an electrical black-out, sudden fault or any other unfavourable condition could cause the appliance not to work; we therefore recommend having an appliance or medicine (agreed with your doctor) for use as an alternative;
 - use the appliance for what it is designed for (aerosol inhalation) and as described in this manual;
 - do not let children or incapable persons use this appliance without supervision; in these cases pay special attention during therapy;
 - do not leave any of the packaging (plastic bags, cardboard boxes, etc.) within the reach of children or incapable persons as they are potential sources of danger;
 - before use, check the integrity of all the components present in the pack; if they are damaged they must not be used;
 - if necessary, use adapters or extension leads that comply to the safety standards in force, paying attention not to exceed the rated current or maximum values shown on the adapter;
 - the electrical devices (nebuliser, adapter, rechargeable battery) have common protection against the ingress of liquids;
 - do not wet electrical devices with water or other liquids; do not use electrical devices if wet by accident;
 - do not use electrical appliances with wet or damp hands, or when taking a bath;
 - keep electrical devices and their power supply cables away from sources of heat;
 - the appliance is not suitable for use in the presence of an inflammable anaesthetic mixture with air, oxygen or nitrous oxide
 - only and exclusively use the adapter and the rechargeable battery supplied with the appliance;
 - do not leave parts or components of the aerosol therapy system exposed to atmospheric agents; keep them in the environmental conditions described;
 - in order not to compromise nebuliser operation, only use original accessories;
 - we recommend personal use of the accessories;
 - do not use the appliance in environments where sprays have just been used; air the room before proceeding with the therapy;
 - the nebuliser is designed to operate for 15 minutes (on) / 30 minutes (off);
 - do not block or obstruct the air openings of the nebuliser and do not place it on a soft surface such as a bed or a divan;
 - do not pull the power supply cable or the appliance to remove the plug from the power socket;
 - always switch the nebuliser off after use. Always remove the adapter from the current socket or remove the rechargeable battery from the nebuliser;
 - in the event of problems and/or faults, consult the Signal Summary Table / Probable Causes and Solutions.

USE INSTRUCTIONS

- Very important: do not switch the appliance on before performing all the operations indicated in the manual. In particular, do not switch it on without placing water in the tank as it could be seriously damaged.**
- If the nebuliser has never been used, clean as described in the "CLEANING PROCEDURE" section.
Position the appliance on a stable surface.
Open the appliance cover.
If the appliance has already been used, check that there is no medicine encrustation blocking its rotation by turning the fan delicately; if it does not turn freely, clean the fan as indicated in the "CLEANING PROCEDURE" section.
Check that the filter is not blocked with dirt or water as this would block the airflow.
Keeping the adapter detached from the electricity supply, insert the adapter output plug into the socket in the lower part of the appliance (fig. 2).
Position the appliance on a stable surface in a way that the adapter is not crushed between the appliance and the surface (fig. 3). If using the base, act so that the cable remains in the correct position (fig. 4).
Fill the tank with tap water up to the mark indicated (fig. 5). We recommend filling with fresh water each time. The nebuliser does not work without water. If the tank is not filled correctly, the appliance will not work and the signal appears on the display
- In particular, do not switch the appliance on without placing water in the tank as it could be seriously damaged.**
- Position the medicine cup on the tank filled with water (fig. 6)
Insert the prescribed medicine into the cup (fig. 7). For this operation avoid using sharp parts (like a syringe needle for example) that could cut or hole the cup.
Do not pour in more medicine than the cup can hold, equal to 8 ml. The maximum capacity is indicated by the reference mark on the medicine cup (fig. 8). If the quantity of medicine to inhale is greater than 8 ml., divide the dose into several parts. Dense medicines or quantities of less than 2 ml. must be diluted with at least 2 ml. of physiological solution to obtain the minimum volume of 4 ml.
Replace the cover on the nebuliser body.
Connect the adapter to the power supply after checking that the power supply voltage corresponds to the rated voltage indicated on the adapter itself (fig. 9). Correct connection is indicated by the green Led coming on.
Connect one end of the extending tube to the cover (fig. 10).

Connect the other end of the tube to one of the accessories as indicated in the accessory connection diagram (fig. 11). Pay attention that the weight of the accessory used (the adult mask, for example) does not create an imbalance causing the appliance to fall. Press the button once to switch on the appliance.

The appliance can operate at 3 different speeds, displayed on the screen by these symbols: Maximum speed: Medium speed Minimum speed

To regulate the air-flow in a different way, (medium and minimum delivery) press the button until the desired speed is reached.
During operation, symbols may appear on the screen. Refer to the "Signal summary table" for their specific meanings.

At end of the treatment press the button once to switch off the appliance.
Paying attention to not spilling the liquids contained in the appliance, disconnect the appliance power supply by disconnecting the electrical power supply of the battery from the appliance.

The green Led must be off.
Clean the appliance as indicated in the "CLEANING PROCEDURE" section.

- Important warnings:**
- Agree the dosage, substances to inhale and the nebulisation speed with your doctor beforehand.
 - Do not switch the machine on without putting water in the tank as serious damage could be caused.**
 - Do not pour liquids other than normal tap water into the tank.
 - Using especially cold liquids (lower than 20°) can cause less nebulisation in the initial minutes of use. For better nebulisation, use water a higher temperature (around 30° C).
 - Do not insert medicine into the water tank.**
 - The nebuliser is designed to operate for 15 minutes (on) 30 minutes (off).
 - Do not switch the machine on with the lid open.
 - Do not open the appliance during operation.
 - Do not approach the medicine outlet to your eyes.
 - The performance of the appliance varies depending on the medicine used.
 - Some medicines are not suitable for use with an ultrasound aerosol. Always consult how the medicine should be used with the doctor.
 - During treatment do not occlude the air inlet or move the appliance awkwardly.
 - During breathing out do not breath into the mouthpiece.
 - Towards the end of treatment, as the medicine is running out the flow tends to diminish slowly until it stops; also, to avoid useless overheating, switch off the appliance when this phenomenon occurs.
- Immediately after use it is possible that the medicine and the water inside the tank are particularly hot; pay attention.
- After around 18 minutes of continuous operation, the internal timer, marked by the symbol coming on, intervenes by automatically switching off the appliance. Before successive re-use, we recommend letting the appliance cool for at least 30 minutes.
 - The appliance has an automatic switching off device that intervenes in the case of an excessive operating temperature. Whenever this condition should occur, (marked by the symbol flashing) let the appliance cool down, for at least 30 minutes.

CLEANING PROCEDURE

All the cleaning operations must be performed keeping the nebuliser disconnected from the electrical power supply. Disconnect the adapter from the power supply socket. Disconnect the adapter pin from the lower part of the appliance, taking care not to let liquid come out of the appliance. If used, disconnect the rechargeable battery. The green Led must be off.
During cleaning activities, prevent the electrical parts, in particular those in the lower part of the nebuliser, from coming into contact with liquids.
Do not use sharp or abrasive objects for any cleaning operations.
Raise and remove the cover.
Extract the medicine cup and empty it of any remaining medicine. There is normally a small quantity of medicine (less than 1 ml.) that is not nebulised.
Completely empty the water contained in the tank.
The cover, cup, masks and mouthpiece must be washed delicately with tepid water and successively dried with a clean cloth.
Clean the nebuliser body and the tank with moistened damp cloth (fig. 12). Do not submerge the appliance in water. If present, eliminate any lime scale deposits from the piezoelectric ceramic (fig.13) and from the metal water sensor (fig. 14) using small stick with cotton wool on the end.

- For these operations, do not use sharp or abrasive objects and take care not to exert excessive force that could cause breakage.**
- If encrustation is found between the fan and the appliance, wet with water. For this operation we recommend using a syringe without a needle (fig. 15). Do not force or bend the fan.
If necessary, remove lime encrustation from the piezoelectric ceramic located in the tank by inserting 1 part of water and 2 parts of white vinegar. Let it act for several hours and rinse several times so as to eliminate vinegar residues. Dry with a soft cloth.

REPLACING THE MEDICINE CUP

The medicine cup must be used when:

- it is damaged or holed; **do not use holed cups;**
- it has been used for 5 treatments;
- the user experiences a clear fall in the performance of the nebuliser;
- a medicine different to the one used previously has been used;
- the nebuliser is used on a new patient.

The ribbing present on the medicine cup is a production characteristic and not a production defect.

REPLACING THE FILTER

The filter prevents external elements from blocking the appliance fan. The filter must be replaced when excessively dirty or when air can no longer pass through. If the filter is encrusted with medicine, it can be rinsed with tepid water and then dried with a clean cloth (fig. 16).

USING THE TABLE BASE

For better stability and convenient use, the appliance can be placed on the table base with three feet that extend (fig. 17). The support base has an attachment belt for fitting the appliance to the sides of a bed or other supports. Slide the fixing belt into the base opening so that the non-slip rubber part locates on the opposite side to the device (fig. 18). Position the base on the fixing element. Adhere the non-slip rubber to the fixing support and firmly close the belt with the Velcro® (fig. 19). In all operations take care not to turn the appliance upside-down or drop it. Before positioning the appliance on the base always check that it is fixed firmly to the support and does not slide on the same. After positioning the appliance in the base, check that it is really stable and vertical.

RECHARGEABLE BATTERY (optional)

- Important warnings:**
- The rechargeable battery (optional) is used to supply the appliance as an alternative to the adapter. For this purpose, only and exclusively use the rechargeable battery supplied.
 - The rechargeable battery must not be used for other appliances or for purposes different to those indicated in this manual.
 - Do not expose the battery to high levels of humidity or high temperatures (e.g. sources of heat, direct sunlight, etc.);
 - Do not place the battery on wet surfaces.
 - Avoid wetting the rechargeable battery. In particular, pay attention to not inserting liquids and/or sharp objects into the power supply sockets located in the upper part.
 - In the case of incorrect use or conservation (battery kept completely submerged in water or kept in close contact with heat sources) the battery may overheat and in extreme cases explode.
 - The battery can be recharged up to around 300 times. Its life is anyway variable, depending on how it is used, conserved and charged.
 - Only and exclusively use the adapter provided for battery charging.
 - It is normal for the battery to become warm during charging and use.
 - High or low temperatures limit battery operation.

BATTERY CHARGING

Connect the adapter to the power supply socket of the rechargeable battery located next the symbol (fig. 20). Connect the adapter to the current socket.

Do not leave the battery on charge for more than twelve hours. Overcharging can bring the risk of shortening the life of the battery. Avoid discharging the battery excessively. If the appliance signals a flat battery by the symbol coming on, switch it off immediately. Recharge as soon as possible. A completely new and charged battery has around 45 minutes of autonomy. It is normal for the battery to loose performance as time goes by.

BATTERY USE

Place the rechargeable battery on a flat surface. Delicately rest the battery on the nebuliser body so that the two parts couple correctly (fig. 21). Correct coupling is indicated by the Led coming on. If the battery pack does not go in correctly, do not force it: repeat the operation delicately. Use the appliance as described in the “use instructions” section. At the end of the treatment delicately remove the battery from the nebuliser, avoiding spilling the liquids in it.

Always remove the battery from the nebuliser when not in use. Leaving the battery in the appliance by mistake flattens the battery.

SYSTEM ELECTRICAL PROTECTION DEVICES

The nebuliser and the rechargeable battery have an internal fuse to protect the electronic circuit from overloads. The replacement operation, and all other repairs must be performed by the constructor company or personnel authorised by the same. Replace the fuse with an equivalent one and one with the same electrical characteristics (delayed fuse).

ELECTROMAGNETIC COMPATIBILITY

The appliance conforms to the electromagnetic compatibility standards currently in force. If electrical devices close by are disturbed by interference, move the appliance or connect it to a different electrical socket.

THE PRODUCER'S RESPONSIBILITY

We are responsible for the safety, reliability and performance of the system, only in the following cases:

- all system components are used in compliance with the instructions in the user manual;
- the electrical system used for supplying the system conforms to the IEC standards currently in force;
- any modifications, repairs or calibration are performed by persons authorised by us.

The producer is not responsible for damage deriving from improper, mistaken or unreasonable uses.

DISPOSING OF THE APPLIANCE

When disposing of the appliance and all its parts, contact specialised disposal centres. **Do not dispose of the appliance in the environment.**

GUARANTEE CONDITIONS

This appliance is guaranteed for the period indicated in the enclosed guarantee certificate. The date of sale must be proven by the sales receipt that the purchaser must conserve. The guarantee covers the appliance for any fabrication defects, on condition that the same is not tampered with by the user or by persons foreign to the authorised service.






The guarantee does not include:

- faults or defects caused by bad use or installation errors.
- interventions for presumed defects, unnecessary inspections, ordinary maintenance and components subject to normal wear.
- accidental damage such as impacts and falls, etc.
- the accessories and parts subject to normal wear.

The guarantee is only valid if the appliance is returned to the stockist together with the sales receipt.

N.B. For repairs or overhauls, return the appliance in a clean condition.

PROBLEM / CAUSE / SOLUTION SUMMARY TABLE

Problem	Display indication	Cause	Solutions
The appliance switches itself off or does not come on		No water or water below the reference level	Fill the reservoir suitably
When using the appliance the battery symbol flashes		The battery is being charged	Switch of the appliance and charge the battery
		If you are using the adapter it indicates a temporary lowering of the power supply voltage	You can continue with the therapy, unless the nebulisation becomes insufficient
The appliance does not come on and the battery symbol flashes		Flat battery	Charge the battery or power the appliance with the adapter
The appliance switches itself off after around 18 minutes. The timer symbol comes on and stays on		Timer intervention	Let the appliance cool for at least 30 minutes
The appliance switches itself off and the timer symbol flashes		The appliance is overheated	Let the nebuliser cool for at least 30 minutes
The appliance remains switched off after pressing ON/OFF	Green LED switched off	Adapter not connected correctly	Check that the adapter is well connected both to the nebuliser and to the electrical socket
		Battery not connected correctly	Make correct connection. See the use manual
		Appliance/battery / adapter damaged	Contact the stockist or an assistance centre
Nebulisation very poor or absent		Too much medicine (more than 8 ml.) in the medicine cup	As indicated in the "USE INSTRUCTIONS" subdivide the dose
		Small amount of medicine	As indicated in the “use instructions” do not insert less than 4 ml.
		Medicine not inserted	Check that medicine is inserted in the medicine cup
		Medicine not suitable for use with ultrasound appliances	Check the instructions enclosed to the medicine and consult a doctor
		Small amount of water in the reservoir	Check that the water arrives at the level indicated
		Fan blocked by encrustation	See cleaning instructions
Noisy appliance		Wet filter / dirty filter	Rinse the filter with water and dry it with a cloth /if necessary replace the filter
		Noisy fan	Check that the fan is not encrusted with medicine. Check that the filter does not touch the fan.
Sudden nebulisation interruption		Air bubble between the cover and the tube	Blow gently into the tube
		Wet filter	Rinse the filter with water and dry it with a cloth
		Medicine has escaped from the medicine cup due to brusque movements	Replace the medicine

Storage (1) and operating (2) environmental conditions:

	Ambient temperature	Relative humidity	Atmospheric pressure
1)	-40 ÷ +70 °C	10 ÷ 100 %	500 ÷ 1060 hPa
2)	+10 ÷ +40 °C	30 ÷ 75 %	700 ÷ 1060 hPa

Adapter electrical data

Plug	Input voltage	Output voltage	Weight
Europe	230 V~ ; 50/60 Hz	22V .0,6 A	550 g approx.
UK	230 V~ ; 50 Hz	22V .0,6 A	550 g approx.
Usa	120 V~ ; 60 Hz	22V .0,6 A	550 g approx.
Australia	240 V~ ; 50 Hz	22V .0,6 A	550 g approx.












Appliance technical data

Power Approx.	Ultrasound frequency	Nebulisation speed	Particle dimensions mmad	Medicine cup capacity	Noise level	Dimensions	Weight
W	MHz	ml/min.	microns	ml	db (A)	cm	g. approx.
13,2	2,5	0,9	2,5	8	< 45	H 14.5 L 9.0 D 6.5	220

Rechargeable battery technical data

Battery type	Electrical data	Weight
Ni-MH	21,6V .700mAh	270 g approx.

Symbols used

Class II appliance	Type B appliance	Attention: consult the instruction manual	Conformity to European directives	Alternate current	ON and OFF	Do not dispose in urban refuse	Material for recycling	Direct current	Producer
									
					ON OFF				



Only for 230V 50Hz unit
0051

Conforms to IEC 601-1 STANDARDS.

